

REMARKS

This amendment is responsive to the Office Action dated May 23, 2008. In the amendment, claims 1-47 remain pending in the application. Claims 1, 11, and 29 are currently amended. New claim 47 has been added. *These amendments add no new matter.* Support for these amendments may be found variously throughout the Specification and in particular, but not limited to, page 47, paragraph 2 of the Specification. Reconsideration and allowance of the pending claims are respectfully requested.

Claims 1, 2, 5, 11-12, 15-18, 21-22, 29-30, 33-36, and 39-40 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,811,927 to Anderson et al. ("Anderson").
This rejection is traversed.

Claim 1 now recites: *[a] flat-type display comprising;*

a first panel and a second panel which are bonded to each other in their circumferential portions and have a space between the first panel and the second panel, the space being in a vacuum state, in which

a spacer is disposed between a first panel effective field and a second panel effective field that work as a display portion;

wherein the spacer is fixed to the first panel effective field and/or the second panel effective field with a low-melting-point metal material layer,

wherein a top surface of the spacer is electrically connected to the first panel through a conductive material layer and a low-melting-point metal material, the conductive material layer being between the top surface of the spacer and the low-melting-point metal material layer, and

wherein another top surface of the spacer is electrically connected to an electrically conductive layer formed on the second panel through a low-melting-point metal material layer and a conductive material layer, the conductive material layer being between the other top surface of the spacer and the low-melting-point metal material layer.

Anderson does not disclose or suggest these features. Anderson discloses "a method for providing spacers in a flat panel display" and "a method for using metal-to-metal bonding to affix spaces to a display plate of a flat panel display." (Anderson, col. 1, lines 5-9.)

Anderson discloses that the edge 106 of the spacer 102 is coated with a suitable metal to provide a bonding layer 108. (Anderson, col. 3, lines 59-61.) Then, metallic compliant members 112 are affixed to the bonding layer 108 via metal-to-metal bonds. (Anderson, col. 4, lines 22-24.) Anderson discloses that the metallic compliant members are made of pure gold or a gold/palladium alloy. (Anderson, col. 4, lines 47-52.)

Anderson discloses that "[r]egions 126 are available for making physical contact with spacers so that a predetermined spacing can be maintained between anode 120 and cathode display plate[.]" (Anderson, col. 5, lines 33-35.) Metallic bonding pads 132 are deposited on the regions 126 between the rows of pixels. (Anderson, col. 6, lines 6-8.) The metallic compliant members are then affixed to portions of the metallic bonding pads, thereby affixing spacers 102 to modified anode 130 in a perpendicular orientation. (Anderson, col. 6, lines 48-52.)

Further, Anderson discloses that the field emission display may further include "a plurality of metallic bonding pads 168, which are formed on cathode 164, and a plurality of metallic compliant members 169, which are affixed to the metallic bonding pads 168[.]" (Anderson, col. 9, lines 23-27.) However, Anderson specifically makes clear that "no bonding layer is required on edge 109 (i.e. the other top surface of the spacer) and no bond is required between edge 109 and metallic compliant member 169." (Anderson, col. 9, lines 30-32.)

Therefore, Anderson clearly fails to disclose or suggest "*wherein a top surface of the spacer is electrically connected to the first panel through a conductive material layer and a low-melting-point metal material, the conductive material layer being between the top surface of the spacer and the low-melting-point metal material layer,*

wherein another top surface of the spacer is electrically connected to an electrically conductive layer formed on the second panel through a low-melting-point metal material layer and a conductive material layer, the conductive material layer being between the other top surface of the spacer and the low-melting-point metal material layer."

Accordingly, Anderson fails to teach, disclose or suggest all of the features of independent claim 1.

Dependent claims 2 and 5 incorporate the features recited in independent claim 1 and are thus distinct for that reason as well as for their separately recited patentably distinct features.

For reasons similar to those described above, the features of independent claims 11 and 29 and dependent claims 12, 15-18, and 21-22, and 30, 33-36, and 39-40 which depend from claims 11 and 29, respectively, are also neither disclosed or suggested by Anderson.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1, 2, 5, 11-12, 15-18, 21-22, 29-30, 33-36, and 39-40 under 35 U.S.C. § 102(b) as being anticipated by Anderson. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.”); *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989) (“The identical invention must be shown in as complete detail as is contained in the ... claim.”).

Claims 4, 14, 20, 32, and 38 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Anderson. This rejection is traversed.

For the reasons described above, Anderson fails to disclose or suggest all the features of independent claim 1. Dependent claim 4 incorporates the features recited in independent claim 1 and is thus distinct for that reason as well as for its separately recited patentably distinct features.

The Office Action makes clear that Andersons fails to disclose or suggest the features recited in claim 4, namely: “[t]he flat-type display according to claim 1, in which the first panel and the second panel are bonded to each other in their circumferential portions through a bonding layer made of a low-melting-point metal material.” (Office Action, pg. 4, lines 16-17.)

To cure the deficiency of Anderson, the Office Action alleges “it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the same low melting point metallic bonding layers in the peripheral portion of the anode plate to bond the first

and second panel through the side wall, since this facilitates manufacturing process as well as provide uniform height.” (Office Action, pg. 4, lines 17-21.)

However, this rejection should be withdrawn for at least two reasons. First, as the Office Action makes clear, Anderson fails to disclose or suggest each and every feature recited in dependent claim 4. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.); *see also* MPEP 2143.03.

Second, such a combination of Anderson’s method of affixing a plurality of spacers within a field emission display with the bonding of the “*first panel and the second panel ...to each other in their circumferential portions through a bonding layer made of a low-melting-point metal material*,” is clearly an attempt to reconstruct Applicant’s claimed invention in hindsight. Anderson’s method of fixing a plurality of spacers within a field emission display serve to support the anode and cathode panels under atmospheric pressure and in no way contemplates a seal as required around the circumferential portions of an evacuated flat-type display.

Applicant submits that the Office Action attempts to reconstruct the claimed invention in hindsight, and has failed to set forth a proper basis for an obviousness rejection. *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998) (The combination of the references taught every element of the claimed invention, however without a motivation to combine, a rejection based on a *prima facie* case of obvious was held improper.).

For reasons similar to those stated above, Applicant submits that the Office Action has failed to set forth a proper basis for an obviousness rejection of claims 14, 20, 32, and 38.

Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 4, 14, 20, 32, and 38.

Claims 3, 13, 19, 31, and 37 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Anderson in view of U.S. Pub. No. 2002/0079802 to Inoue et al. (“Inoue”). This rejection is traversed.

As discussed above, Anderson fails to disclose or suggest “*wherein a top surface of the*

spacer is electrically connected to the first panel through a conductive material layer and a low-melting-point metal material, the conductive material layer being between the top surface of the spacer and the low-melting-point metal material layer,

wherein another top surface of the spacer is electrically connected to an electrically conductive layer formed on the second panel through a low-melting-point metal material layer and a conductive material layer, the conductive material layer being between the other top surface of the spacer and the low-melting-point metal material layer."

Inoue does not remedy the deficiencies of Anderson. Inoue discloses an electron-emitting device and a cold cathode field emission device. (Inoue, para. [0001].) Inoue provides "an electron-emitting device and a cold cathode field emission device that permit electron emission in a far lower electric field, make it possible to decrease the temperature to be employed for forming an electron emitting portion and have the electron emitting portion made of carbon and reliably formed in a desired portion of the electrically conductive layer or a cathode electrode[.]" (Inoue, para. [0028].)

Inoue is relied upon for disclosing "bonding [of] the first and second panel in their circumferential portions through a bonding layer made of frit glass[.]" (Office Action, pg. 5, lines 5-7.) However, Inoue, like Anderson fails to disclose or suggest "*wherein a top surface of the spacer is electrically connected to the first panel through a conductive material layer and a low-melting-point metal material, the conductive material layer being between the top surface of the spacer and the low-melting-point metal material layer,*

wherein another top surface of the spacer is electrically connected to an electrically conductive layer formed on the second panel through a low-melting-point metal material layer and a conductive material layer, the conductive material layer being between the other top surface of the spacer and the low-melting-point metal material layer," as recited in independent claim 1.

Dependent claim 3, which depends from independent claim 1, is distinct for its incorporation of the features recited in independent claim 1, as well as for its own, separately recited patentably distinct features.

For reasons similar to those described above, the features of dependent claims 13 and 19, and 31 and 37, which depend from independent claims 11 and 29, respectively, are also neither disclosed or suggested by any permissible combination of Anderson and Inoue.

Because Anderson and Inoue, either alone or in any permissible combination fail to teach, disclose, or suggest all the features recited in dependent claim 3, 13, 19, 31, and 37, Applicant respectfully requests reconsideration and withdrawal of the rejection of these claims under 35 U.S.C. § 103(a) as being unpatentable over the combination of Anderson and Inoue. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.); *see also* MPEP 2143.03.

Claims 6-7, 9-10, 23-24, 26-28, 41-42, and 44-46 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Anderson in view of U.S. Pub. No. 2002/0096992 to Hsiao et al. ("Hsiao"). This rejection is traversed.

Claims 6-7 and 9-10 depend from claim 1 and thus incorporates the features recited therein. As noted above, Anderson fails to disclose or suggest *"wherein a top surface of the spacer is electrically connected to the first panel through a conductive material layer and a low-melting-point metal material, the conductive material layer being between the top surface of the spacer and the low-melting-point metal material layer,*

wherein another top surface of the spacer is electrically connected to an electrically conductive layer formed on the second panel through a low-melting-point metal material layer and a conductive material layer, the conductive material layer being between the other top surface of the spacer and the low-melting-point metal material layer."

Hsiao discloses a structure for the packaging technique of a large size field emission display wherein the spacer is fixed on the upper plate through an anodic assembling technique. (Hsiao, para. [0001].) However, Hsiao does not remedy the deficiencies of Anderson.

Since even the combination of Anderson and Hsiao would fails to yield Applicant's claimed invention, it is submitted that a *prima facie* case of obviousness is absent regarding claims 6-7 and

9-10. For reasons similar to those provided regarding claim 6-7 and 9-10, dependent claims 23-24, and 26-28, and 41-42 and 44-46, which depend from independent claims 11 and 29, respectively, are also neither disclosed nor suggested by the relied-upon references.

Because Anderson and Hsiao, either alone or in any permissible combination fail to teach, disclose, or suggest all the features recited in dependent claims 6-7 and 9-10, 23-24, 26-28, 41-42, and 44-46, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 6-7 and 9-10, 23-24, 26-28, 41-42, and 44-46 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Anderson and Hsiao.

Claims 8, 25, and 43 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Anderson in view of Hsiao and further in view of Inoue. This rejection is traversed.

Claim 8 depends from claim 1 and thus incorporates the features recited therein. As noted above, Anderson, Hsiao, and Inoue, alone or in any combination, fail to disclose or suggest the features of claim 1.

Accordingly, the combination of Anderson, Hsiao, and Inoue would still fail to yield the features recited in claim 1. Claim 8 is also neither disclosed nor suggested by these references because it incorporates the features of claim 1 as well as its own separately recited patentably distinct features.

For similar reasons, the features of claims 25 and 43, which depend from independent claims 11 and 29, respectively, are also neither disclosed nor suggested by any combination of Anderson, Hsiao, and Inoue because of their incorporation of the features recited in claims 11 and 29 as well as their own separately recited patentably distinct features.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 8, 25, and 43 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Anderson, Hsiao, and Inoue.

CONCLUSION

In view of the foregoing arguments, all claims are believed to be in condition for allowance. If any further issues remain, the Examiner is invited to telephone the undersigned to resolve them.

This response is believed to be a complete response to the Office Action. However, Applicant reserve the right to set forth further arguments supporting the patentability of their claims, including the separate patentability of the dependent claims not explicitly addressed herein, in future papers. Further, for any instances in which the Examiner took Official Notice in the Office Action, Applicant expressly do not acquiesce to the taking of Official Notice, and respectfully request that the Examiner provide an affidavit to support the Official Notice taken in the next Office Action, as required by 37 C.F.R. § 1.104(d)(2) and MPEP § 2144.03.

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Respectfully submitted,

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